DISTANCE-BASED ROAD USER FEE WORKSHOP

UNIVERSITY OF NEVADA, RENO
JOE CROWLEY STUDENT UNION
BALLROOM (C)

SATURDAY, MAY 9, 2009
8:30 AM TO 12:30 PM

Revenue Analysis & Mileage Based User Fee Structure

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President

SIERRA TRANSPORTATION ENGINEERS, INC.

NEVADA DOT N RTC

Vehicle Miles Traveled (VMT) User Fee

- New revenue alternative
- Based on counting vehicle miles travelled
- Fees will be collected on a per mile basis
- Revenue may be distributed among jurisdictions based on amount of travel in each

US Studies

- Oregon Department of Transportation (ODOT)
- University of Iowa
- Puget Sound Regional Council (PSRC)
- Minnesota Department of Transportation (Mn/DOT)

ODOT Study

- Launched 12 month pilot program in 2006
  - 285 vehicles
  - 299 volunteer motorists
  - 2 service stations in Portland, OR
- Studied both distance charges and congestion pricing

ODOT Study

- Technology
  - Dashboard display
  - GPS receiver
  - Antenna to track miles in zones
  - Mileage counter
  - Short-range RF antenna
- Public Acceptance
  - Privacy protection
  - Rate equity
  - Fairness
  - Technology reliability
  - Cost

ODOT Study Key Findings

- Concept is viable
- Paying at the pump works
- Mileage fee can be phased in
- Integration with current systems can be achieved
- Congestion and other pricing options are viable
- Privacy is protected
- Potential for evasion is minimal
- Cost of implementation and administration is low

University of Iowa Study

- Federally funded project to see how the public responds to mileage based road user charge system
- Primary goals
  - Make sure that system is reliable, secure, flexible, user friendly, and cost effective
  - Find out why vehicle operators accept or reject the system, what they like, and what they don't like

University of Iowa Study

- Phase 1
  - Develop field test concept
  - Specify technology
  - Completed in September 2002
- Phase 2
  - Refine approach
  - Conduct field test
  - Collect and assess data
  - Started October 2005

University of Iowa Study

- Four Year Field Test
  - Austin, Texas
  - Baltimore, Maryland
  - Boise, Idaho
  - Eastern Iowa
  - Research Triangle Region of North Carolina
  - San Diego, California

Puget Sound Traffic Choices Study

- Started July 2005 for 18 months
- 450 volunteer drivers
- 275 households
- Vehicles equipped with onboard GPS receivers, digital road maps, and cellular communications

Puget Sound Traffic Choices Study

- Virtual congestion charges were established for each link
- Volunteers given account where tolls were deducted
- If driving patterns did not change

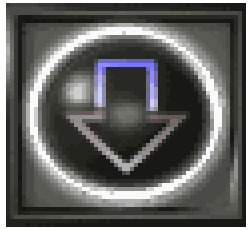
  Drivers would spend account balance

- If driving patterns did change

  Drivers would keep difference

Puget Sound Traffic Choices Study

- Findings
  - 7% reduction in all vehicle trips per week
  - 12% reduction in vehicle miles travelled per week
  - 8% reduction in minutes of driving per week
  - 13% reduction in miles driven on tolled roads



Puget Sound Traffic Choices Study

- Conclusions
  - Opportunity to significantly reduce traffic congestion and raise revenues for investment
  - Core technology for satellite based toll system is mature and reliable
  - Large scale deployment will depend on proven systems, viable business model, and public acceptance

Mn/DOT Study

- Pay-As-You-Drive (PAYD) Study
- Simulate replacement of fixed costs system to variable costs system
- Develop understanding of driver acceptance
- Identify strategies to “mainstream” policies

Mn/DOT Study

- Technology
  - GPS
  - Cellular

- "CarChip"
  - Store and transmit
  - Time of travel
  - Distance travelled
  - Speed
  - **No location information**

VMT User Fee Advantages

- Cost distribution equity
  - Charges drivers in direct proportion to the use of the road system
  - Has greater precision than the current gas tax
- Revenue distribution equity
  - Measures amount of travel in different jurisdictions and distribute revenues accordingly

VMT User Fee Advantages

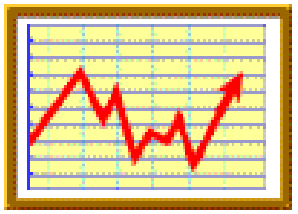
- Economic efficiency
  - Allows implementation of additional forms of pricing such as per-mile fee increase for travel during congested periods
  - Assists drivers to improve their travel behavior
- Proven technology
  - Successful pilots tests within the US and Europe
  - Tested onboard computer equipment, GPS receivers, digital maps, and wireless communications

VMT User Fee Advantages

- Significant revenue potential
  - Limited only by political consideration
    - Could be set as revenue-neutral
    - Could be set to increase revenues
- Revenue stability
  - Varies only with total vehicle travel
  - Proportional to demands for road maintenance and expansion

VMT User Fee Potential Obstacles

- Inflation
  - Index per-mile fees
  - Periodic rate increase
- Capital expense
  - Onboard equipment costs
  - Cost of collecting and distributing revenues
- Evasion concerns



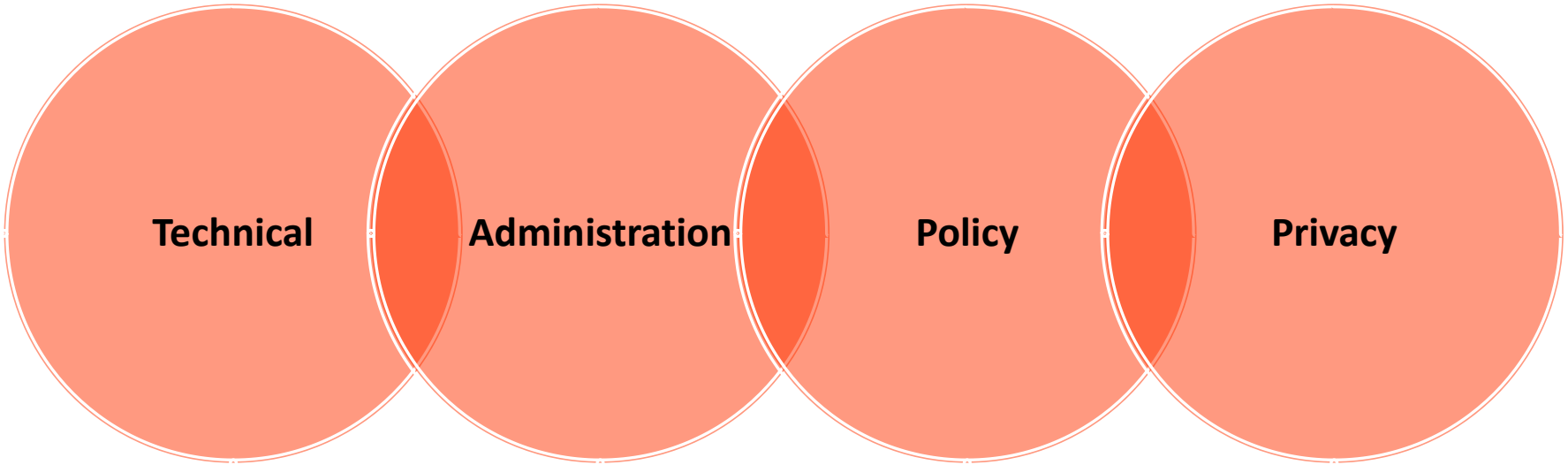
VMT User Fee Potential Obstacles

- Institutional framework
  - Needs to be developed based on a national or a regional implementation schemes
- Program phase-in
  - New cars equipped with VMT user fee equipment
  - Older cars continue to pay traditional fuel taxes
  - Two revenue systems during transition phase

VMT User Fee Potential Obstacles

- Public objections
  - Privacy
    - Concern that government can use the information to monitor travel patterns of individuals
  - Environmental
    - Concern about diminishing incentives for purchasing more fuel-efficient vehicles
- Pilot programs have shown that there are technical and pricing strategies to overcome those concerns

Review Analysis & Mileage Based User Fee Structure



Roles of Workshop Participants

Dr. Eric B. Herzik

Professor

Department of Political Science

University of Nevada, Reno

Why Are You Here?

- Examining potential policy change.
- No policy choice has been made and a change may not occur.
- Need input to know what issues, concerns, and questions you might identify with a possible shift to distance-based road user fee system.

General Areas For Input

- **Technical:** How do we physically collect and verify miles driven?
- **Administration:** How is the tax collected and the data stored?
- **Policy:** How are decisions made concerning the extent and fiscal impact of a VMT?
- **Privacy:** What data are to be collected and how will this be reported and stored?

Technical: How do we physically collect and verify miles driven?

- General concerns might cover issues of cost, reliability, security, privacy, etc.
- Examples of specific questions might include:
  - If a GPS system is adopted who pays for installation?
  - Will this interfere with vehicle performance?
  - Does this always track me?

Administration: How is the tax collected and the data stored?

- General concerns might cover issues of administrative overhead costs, convenience of paying, access to records.
- Examples of specific questions might include:
  - Who will collect this (public, private entity) tax?
  - How often will I pay?
  - Can disputes be filed?
  - Who oversees the data?

Policy: How are decisions made concerning the extent and fiscal impact of a VMT?

- General concerns might cover issues of what level of government sets policy, tax rates, public oversight.
- Examples of specific questions might include:
  - Will this lead to increased transportation taxation?
  - Will rules encourage and/or discourage particular driving behaviors (congestion pricing)?
  - How will funds be distributed throughout the state?

Privacy: What data are to be collected and how will this be reported and stored?

- General concerns might cover public acceptance and compliance, whether the system is mandatory or voluntary, etc.
- Examples of specific questions could include:
  - Must I have a device installed in the car (mandatory vs. voluntary system)?
  - Will law enforcement have access to a driver's record of travels?
  - Should the system track specific routes to implement a congestion pricing cost structure?

Rules Of Engagement

- No ideas, concerns, questions or statements are wrong or not worth considering.
- Concerns and issues should, as much as possible, come in form of statements. Think of a question, but then give a stated answer or preference.
- Concerns may cross subject domains. For example, privacy statements could easily be made in all four domains.

Rules Of Engagement

- Stated ideas and concerns do not have to be unique – you will see what others have stated and you can elaborate upon what has already been identified.
- The facilitators will try to group statements.
- Speak up, but let everyone speak.

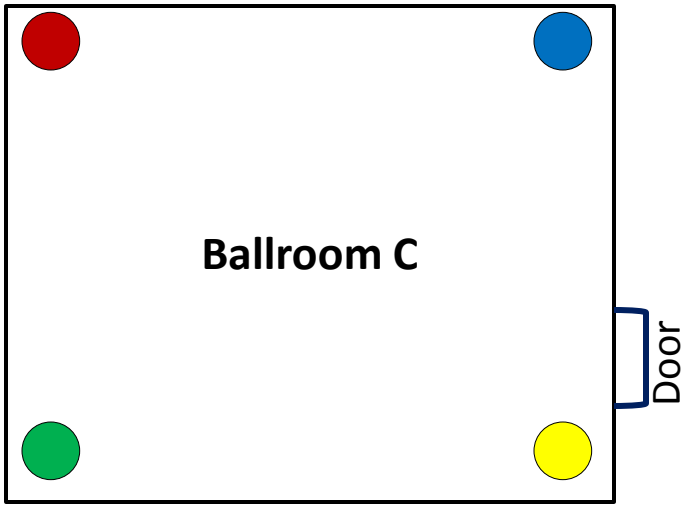
Ranking

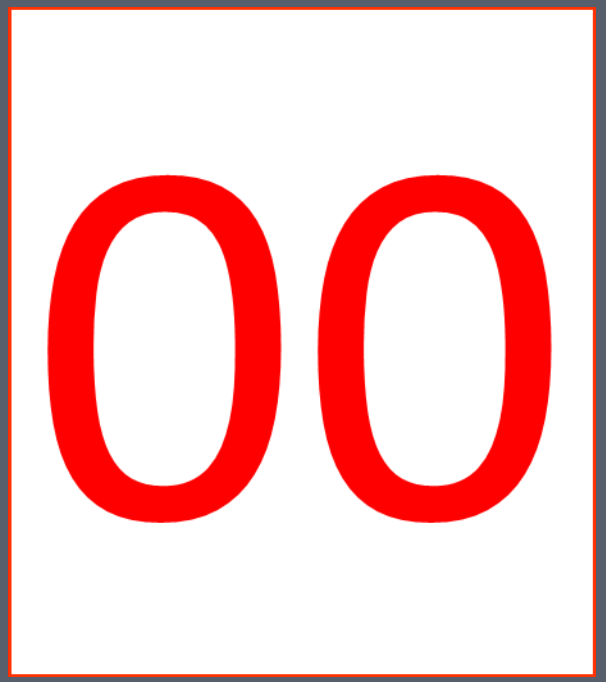
- After the process of issue identification is complete you will revisit each area and priority rank the concerns.
- The ranking will give a visual representation of concerns.

BREAK

Breakout Session

What Issues Would You Consider?



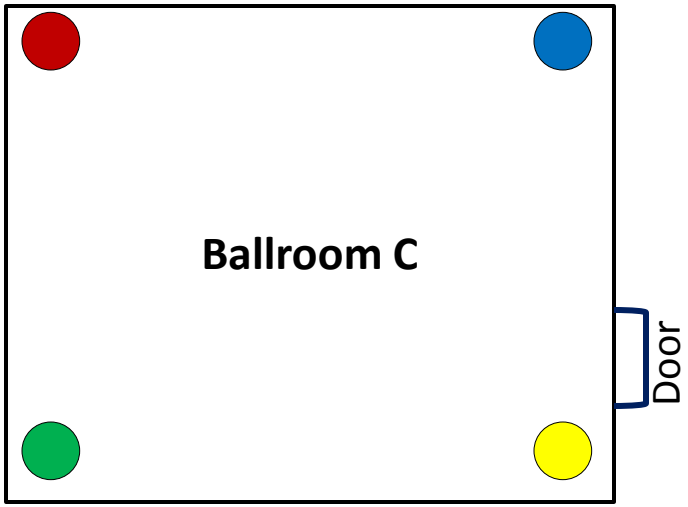


BREAKOUT SESSION

BREAK

Breakout Session

What Other Factors Would You Consider?



BREAKOUT SESSION

Breakout Session

Rank Issues

Place “Stickers” To Place Next To Top Concerns

BREAKOUT SESSION

Top Identified Issues

Which Issue Has Most Stickers?

Next Steps

- We will record every statement and/or question from each subject domain and post to a website.
- We will provide the ranking data.
- These initial concerns and ranking will be the baseline for future workshops.

Closing Remarks

Susan Martinovich, P.E.

Director

Nevada Department of Transportation (NDOT)

&

Derek Morse, P.E.

Interim Executive Director

Regional Transportation Commission (RTC) of Washoe County